

AMENDMENTS TO THE CLAIMS

1–17. (Canceled)

18. (Original) A method of cooling an axle assembly of a work vehicle, wherein the axle assembly includes an axle shaft, an axle housing configured to substantially surround the axle shaft, a cooling coil housed within the axle housing and having a passage therethrough and outer and inner surfaces, a lubricating fluid disposed within the axle housing, and a cooling fluid disposed within the passage, and further wherein the lubricating fluid is of a higher temperature than is the outer surface of the coil and the outer surface of the coil is of a higher temperature than is the cooling fluid, the method comprising steps of:

removing heat from the lubricating fluid by placing the lubricating fluid in contact with the outer surface of the coil; and

removing the heat from the inner surface of the coil by circulating the cooling fluid through the passage.

19. (Original) The method of claim 18, further comprising the step of:
directing flow of cooling fluid to the coil by using a back pressure regulating valve to impose a pressure difference across the coil.

20. (Original) The method of claim 19, further comprising the step of:
removing the heat from the cooling fluid by circulating the cooling fluid through a heat exchanger.